

**ORDER**

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

8130.27

1/11/96

SUBJ: CERTIFICATION AND OPERATION OF AIRCRAFT UNDER THE EXPERIMENTAL PURPOSE(S) OF RESEARCH AND DEVELOPMENT, EXHIBITION, AND/OR AIR RACING; AND ISSUANCE OF SPECIAL FLIGHT AUTHORIZATION FOR NON-U.S. AIRCRAFT

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**1. PURPOSE.** This order provides information and guidance to aviation safety inspectors (ASI) in the issuance of special airworthiness certificates and operating limitations for former military aircraft certificated for the purpose(s) of research and development, exhibition, and/or air racing; approval of aircraft inspection programs for large and turbine powered experimental aircraft; and issuance of letters of authorization (LOA) for persons to operate large and turbine-powered experimental aircraft.

**NOTE:** Final resolution of any safety related issue is the responsibility of the certificating office. If there is any question of a conflict between this document and any current Federal Aviation Administration (FAA) directive, the policy in this order will take precedence over that directive.

**2. DISTRIBUTION.** This order is distributed to the Washington headquarters division level of the Flight Standards Service; to the branch levels of the Aircraft Certification Service and the Aviation System Standards Office; to all Airport Divisions; to the branch level in the regional Flight Standards Divisions; to all Flight Standards District Offices; to all Manufacturing Inspection District and Satellite Offices; to the Regulatory Standards and Compliance Branch of the FAA Academy; and to the Brussels Aircraft Certification Division and Flight Standards Staff.

**3. BACKGROUND.** On July 9, 1993, the FAA issued a memorandum that established a moratorium on experimental airworthiness certification of non-U.S. manufactured aircraft for the experimental purpose(s) of

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exhibition and air racing; as well as special flight authorizations (SFA's) under 14 CFR part 91, § 91.715 for non-U.S. manufactured aircraft that do not hold U.S. type certificates (TC) issued under the provisions of 14 CFR part 21 § 21.29.

a. The moratorium was effected because of a dramatic increase in applications for special airworthiness certificates and SFA's for non-U.S. manufactured aircraft that did not hold type certificates issued under § 21.29. The moratorium was lifted on August 18, 1993, with interim guidance provided to certificate these aircraft. This order provides long term guidance for airworthiness certification, continued airworthiness, and operational requirements for all aircraft that received original airworthiness certification on or after July 9, 1993. Although, the moratorium was established for non-U.S. manufactured aircraft, this policy will be used when issuing a special airworthiness certificate for the experimental purpose(s) of exhibition or air racing, regardless of the country of manufacture.

b. Aircraft that received original airworthiness certification prior To July 9, 1993, **ARE NOT** effected by this order. Those aircraft will not be effected until such time as the FAA works with the public to determine the best strategy to certificate all experimental exhibition and/or air racing aircraft in accordance with the new policy. If any aircraft that originally received a special airworthiness certificate prior to July 9, 1993, should need a new airworthiness certificate due to a change in operating limitations or the expiration of an airworthiness certificate, policy in effect prior to the July 9, 1993, moratorium will be used to issue the airworthiness certificate. The policy established in this order will not be used in these cases unless specifically requested by the applicant.

**4. EXHIBITION ACTIVITIES.** There has been some confusion in the past as to what constitutes exhibition. In an effort to minimize this confusion, the FAA has determined that exhibition could be a wide range of activities. These include: organized airshows, organized air races, organized fly-in activities, organized exhibitions, youth education events, shopping mall/school/similar static displays, organized acrobatic competition, sail plane fly-ins or competitive races or meets, and movie or television productions.

**5. FORMER MILITARY AIRCRAFT.** Many of the aircraft that are presented for airworthiness certification under the purpose(s) of exhibition or air racing are former military aircraft, both U.S. and non-U.S. The FAA acknowledges the significant role military aircraft have played in our aviation heritage and the importance of preserving their legacy for future generations. The exhibition of former military aircraft at aviation events for demonstration and display provides the public a rare view into our aviation past. Therefore, it is the policy of the FAA to permit the operation of surplus military aircraft for civilian use, consistent with the need to safeguard the general public.

**NOTE: It should not be interpreted that all military aircraft require experimental airworthiness certificates. Some have valid type certificates and could be eligible for a standard airworthiness certificate**

a. Surplus military aircraft have historically operated in the United States for research and development, air racing, and exhibition purposes in the experimental category. It is the policy of the FAA that eligible aircraft will be certificated in experimental when operated for the special purposes listed in paragraph 1 of this order.

b. To ensure the safe operation and minimize adverse environmental impacts resulting from the operation of these aircraft, the FAA has established appropriate and reasonable operating limitations. Operating limitations developed jointly by the Aircraft Certification Service and Flight Standards Service are contained in appendix 1 of this order.

c. The ability of civilian operators to maintain and operate these aircraft depends upon their background and experience, training and facilities, availability of technical manuals and design information, and the complexity of the aircraft involved. To this end, and to the maximum extent feasible, it is the policy of the FAA to recognize the most complete sources of maintenance and training and to encourage owners, operators, and flight crew members to utilize these sources and successfully complete required training from recognized training organizations. Aircraft inspection guidelines and qualification standards for flight crew members have been developed by the Flight Standards Service and are contained in appendices 2 and 3 of this order.

d. Applicants for certification of former military turbine powered aircraft (TPA) must be advised that these aircraft were designed and manufactured without the acoustical treatment provided for current commercial and business Turbine Powered Aircraft. They must also be advised of industry developed procedures and guidelines designed to minimize the impact such aircraft impose at airports and the surrounding communities. Aircraft operators must accept the responsibility for operating their aircraft in such a manner as to reduce the noise impact to the lowest practicable level. The Experimental Aircraft Association (EAA) has developed operating procedures and a recommended program for reducing the noise impact of TPA. The EAA's recommended procedures are contained in its Jet Operations Manual. The FAA certificating inspector must advise persons considering operating such aircraft to become familiar with and use the procedures outlined in the EAA's Jet Operations Manual or procedures acceptable to the Administrator.

e. In recent years, the number and types of TPA have greatly expanded, mostly as a result of importation of aircraft of

non-U.S. manufacture. Examples of these aircraft include models such as the Northrop F-5, which is of U.S. manufacture, and the Mikoyan MiG-15 of non-U.S. manufacture. It is of critical importance to the FAA, the civilian owners and operators of such aircraft, and the general public that these aircraft are operated safely in the United States National Airspace System.

**6. GLIDER AIRCRAFT.** Glider aircraft represent approximately 25 percent of the experimental exhibition fleet. This is due, at least in part, to a misinterpretation of FAA Order 8130.15, Airworthiness Certification of "Prematurely" Exported Gliders. Order 8130.15 provides the procedure for issuance of a standard airworthiness certificate for non-U.S. manufactured gliders which have been exported to the United States prior to the issuance of a § 21.29 type certificate (TC). Since this activity has been highlighted recently, the FAA has been working closely with the Soaring Society of America to ensure that non-U.S. manufacturers pursue § 21.29 TCs for these aircraft. If these gliders do not receive U.S. TC's, the FAA may establish permanent policy that will limit future operation of gliders beyond that described in paragraph 8a of this order. The FAA will continue to consider non-U.S. produced gliders for experimental airworthiness certification while the revised procedures for issuing a TC under § 21.29 are being developed.

**7. BROKERING.** Section 21.191 (d) was not intended to allow for the brokering or marketing of experimental aircraft. This includes individuals who manufacture, import, or assemble aircraft, and then apply for and receive experimental exhibition airworthiness certificates, so they can sell the aircraft to buyers. Section 21.191 (d), only provides for the exhibition of an aircraft's flight capabilities, performance, or unusual characteristics at airshows, motion picture, television, and similar productions. Certificating offices should ensure that all applications for exhibition airworthiness certificates are for the purposes specified under § 21.191 (d), and are from the registered owners who will exhibit the aircraft for those purposes. Applicants must also provide the applicable information specified in § 21.193.

**8. GROUPS OF AIRCRAFT.** Aircraft that have been presented for experimental airworthiness certification for exhibition or air racing, range from unpowered gliders to high performance jet aircraft. In order to properly certificate this wide range of aircraft, and in response to the many public comments received, the FAA has divided these aircraft into four "groups." This was done in order to establish standardized operating limitations, proficiency areas, and inspection requirements appropriate to each aircraft. Minimum operating limitations for each group are provided in appendix 1 of this order. The certificating inspector will make a determination of which group the aircraft will operate in based on the following:

a. **GROUP I, Performance Competition Aircraft.**

(1) **Description of Aircraft.** Specialty aircraft, limited availability. Possess design characteristics that make the aircraft suitable for competition in that the operational parameters are designed for only one purpose such as maneuverability, flight duration, or speed; and as such would only be used in performance based competition events and would not be utilized for personal business or transport activity.

(2) **Type of Aircraft.** Aerobatic aircraft or Powered/Unpowered Gliders. Examples of aircraft that would operate under this group include the Rolladen-Schneider LS-4b, Schleicher ASW-24, Pitts Special, Sukhoi SU-26, Sukhoi SU-29, etc.

(3) **Proficiency Area.** A radius of 300 nautical miles from their designated home base airport (See note at the end of this section).

(4) **Inspection Requirements.** Must be inspected each year in accordance with an inspection plan that contains the scope and detail of 14 CFR part 43 (part 43), Appendix D.

b. **GROUP II, Turbine Powered Aircraft.**

(1) **Description of Aircraft.** Includes any TPA, i.e., jet, turbo-fan, and turbo-prop; except those TPA that have a design capability of carrying cargo or more than 4 occupants. Those TPA that have a design capability of carrying cargo or more than 4 occupants will be certificated using the guidelines under Group IV.

(2) **Type of Aircraft.** Turbine powered aircraft. Examples of aircraft that would operate under this group include the Mikoyan MiG-17, Aero Vodochody L-29, Hispano Aviacion HA-200 Saeta, Fouga CM 170 Magister, Lockheed or Canadair T-33, etc.

(3) **Proficiency Area.** Limited to a radius of 600 nautical miles from the designated home airport. Proficiency flights will be limited to a non-stop flight that begins and ends at the specified home airport, with sufficient fuel reserve to meet the applicable operating rules of part 91. Operators who choose to fly to another airport within the assigned proficiency area must notify their geographically responsible FSDO prior to each proficiency flight away from their home airport (See note at the end of this section).

(4) **Inspection Requirements.** Must have a Flight Standards District Office-approved inspection program that meets the requirements of § 91.409(e). (See appendix 2 of this order for inspection program information.)

**c. GROUP III, Piston Powered: Warbirds, Vintage, Replica, Unique Aircraft.**

(1) **Description of Aircraft.** Includes former military aircraft that were designed for military operations. Vintage aircraft are those aircraft that were designed prior to 1945. Replica aircraft are those aircraft that have the same external configuration as an aircraft that was designed prior to 1945. Unique aircraft means those aircraft that are one-of-a-kind.

(2) **Type of Aircraft.** This group includes U.S. piston powered warbirds (regardless of size) and non-U.S. piston powered aircraft under 12,500 lbs. that meet the above description and do not have a design capability of carrying cargo or more than 4 occupants. Examples of aircraft that would operate under this group include the North American T-28, Lockheed P-38, North American P-51, Messerschmitt ME-109, Boeing B-17, North American B-25, DeHavilland DHC-1 Chipmunk or Tiger Moth DH 82A, Focke-Wulfe Piaggio (FWP)-149, Nord Stampe SV4C, Bucker Jungman BU-131, etc.

(3) **Proficiency Area.** Aircraft under 800 hp will have a radius of 300 nautical miles from their designated home base airport. Aircraft 800 hp and above will have a radius of 600 nautical miles from their designated home base airport (See note at end of this section).

(4) **Inspection Requirements.** Aircraft under 800 hp must be inspected each year in accordance with an inspection plan that contains the scope and detail of part 43, Appendix 3. Aircraft 800 hp and above must be inspected in accordance with appropriate military technical publications or manufacturers' instructions for the aircraft.

**d. GROUP IV, Other Aircraft.**

(1) **Description of Aircraft.** All aircraft that do not clearly fit in any of the other groups. This group will include aircraft that should be in the standard category that have been modified but the modification has not been processed under the supplemental type certificate (STC) process; and aircraft over 12,500 lbs. or those that have a design capability of carrying cargo or more than 4 occupants. This group also includes any newly produced aircraft that does not have a TC under § 21.21 or 21.29, with the exception of those aircraft that meet the description of aircraft for Group I. Additionally, this group includes aircraft that could normally be eligible for amateur-built airworthiness certification, but the owner has chose to not perform the major portion of the fabrication and assembly as required under § 21.191(g), Operating Amateur-Built Aircraft.

(2) **Type of Aircraft.** Includes aircraft that have a design capability of carrying cargo or more than 4 occupants, and any other aircraft that does not clearly belong in any of the other groups. Examples of aircraft that would operate under this group include the Lockheed C-130, Antonov AN-2, Antonov AN-24, Iluyshin IL-76, Cessna 172 with an automobile engine not approved under an STC, etc.

(3) **Proficiency Area.** Limited to a non-stop flight that begins and ends at the specified home airport, with sufficient fuel reserve to meet the applicable operating rules of part 91. An alternate airport selection **IS NOT** available for aircraft in this group (See note at end of this section).

(4) **Inspection Requirements.** Aircraft that weigh 12,500 lbs. or less must be inspected each year in accordance with an inspection plan that contains the scope and detail of part 43, Appendix D. Aircraft over 12,500 lbs. must have a FSDO-approved inspection program that meets the requirements of § 91.409(e).

**NOTE:** This NOTE is applicable to Group I, II, III, and IV aircraft. During proficiency flights, aircraft will be restricted to airports that are within airspace classes C, D, E, or G; except in the case of a declared emergency or when otherwise directed by Air Traffic Control.

When defining the proficiency area, the certificating inspector will coordinate with the local FSDO operations unit to highlight an aeronautical chart or map with the identification of the proficiency area. The highlighted aeronautical chart or map will become a part of the aircraft operating limitations and must be carried aboard the aircraft at all times.

**9. RESEARCH AND DEVELOPMENT.** This order is primarily provided for information and guidance when issuing special airworthiness certificates for the experimental purpose(s) of exhibition and air racing. Since some of the same types of aircraft, especially TPA are used in research and development (R&D), the purpose of R&D is addressed in this order. Former military aircraft are often used in R&D projects, and it is appropriate to use the guidance in this order when performing R&D certification of former military aircraft.

**10. FURTHER INFORMATION.** Appendix 1 contains information and guidance to ASIs who are responsible for airworthiness certification and establishing operating limitations for these aircraft. Appendix 2 contains information and guidance for FSDO Airworthiness ASIs who are responsible for approving an applicant's inspection program when required by operating limitations. Appendix 3 contains

information and guidance for FSDO Operations ASIs who are responsible for issuing a LOA to qualified pilots who desire to operate aircraft where an LOA or type rating is required. Policy for the issuance of special flight authorizations for non-U.S. civil aircraft is provided in Order 8130.2C, Airworthiness Certification of Aircraft and Related Products, Chapter 7.

**11. FUTURE INCORPORATION.** The information contained in this order will be incorporated in appropriate FAA directives as follows:

a. Applicable material from appendix 1 will be incorporated into FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Approvals. Questions and comments regarding information in appendix 1 or airworthiness certification issues should be addressed to the office of primary responsibility (OPR), the Production and Airworthiness Certification Division, AIR-200.

b. Applicable material from appendix 2 will be incorporated into FAA Order 8300.10, Airworthiness Inspector's Handbook. Questions and comments regarding information in appendix 2 or any continued airworthiness issues should be addressed to the OPR, the Aircraft Maintenance Division, AFS-300.

c. Applicable material from appendix 3 will be incorporated into FAA Order 8700.1, General Aviation Operations Inspector's Handbook. Questions and comments regarding information in appendix 3 or any aircraft operational issues should be addressed to the OPR, the General Aviation and Commercial Division, AFS-800.

**12. APPROVAL.** This order has been coordinated and approved by the directors of Aircraft Certification Service and Flight Standards Service.



Frank P. Paskiewicz  
Acting Manager, Production and Airworthiness  
Certification Division



**APPENDIX 1. EXPERIMENTAL CERTIFICATION REQUIREMENTS  
AND OPERATING LIMITATIONS**

**1. GENERAL.** This appendix contains information and guidance concerning airworthiness certification and establishing operating limitations for experimental aircraft certificated for the purpose(s) of research and development, exhibition and/or air racing.

**2. CERTIFICATION REQUIREMENTS.** The following steps are in the normal order of occurrence for the certification of these aircraft.

a. **Demilitarization of Former Military Aircraft.** Former military aircraft should be demilitarized prior to application for airworthiness certification. It is not possible to define what the final configuration of these aircraft will be following this demilitarization. Therefore, since the demilitarization process will most likely involve a change to the aircraft configuration, FAA representatives should not consider an application for airworthiness certification unless demilitarization has been completed.

(1) It is the policy of the U.S. Department of Defense (DoD) that surplus U.S. military property designated as arms, ammunition, implements of war, and other military items will be demilitarized to the extent necessary to preclude the unauthorized use of these military items. The intent behind this DoD policy is to destroy the military advantages inherent in certain types of property, render harmless that property which is dangerous, and to protect the national interest. This DoD policy mandates that tactical, fighter, and bomber aircraft will be demilitarized to the extent that will render the aircraft not airworthy. This DoD policy is not applicable to military trainer, observation, or liaison aircraft. Additionally, DoD does release a limited number of tactical, fighter, and bomber aircraft for operation in R&D programs. Typically, these aircraft may only be demilitarized to the extent that classified equipment has been removed.

**NOTE:** This does not mean that all other U.S. surplus military aircraft should have been rendered not airworthy. For example, some U.S. military aircraft that were sold to other countries may be available for public sale. These aircraft are subject to the import requirements that are listed in paragraph 2a(2) of this appendix. Additionally, other aircraft may have been constructed from surplus parts.

(2) Former military aircraft imported from **ANY** other country require an import permit issued by the Department of Treasury, Bureau of Alcohol, Tobacco, and Firearms (ATF). This is granted by ATF

using an ATF Form 6, Application and Permit for Importation of Firearms, Ammunition and Implements of War. Additionally, these former military aircraft are required to be demilitarized in order to clear U.S. Customs. Compliance with demilitarization is evidenced by a completed ATF Form 6A, Release and Receipt of Imported Firearms, Ammunition and Implements of War. Proof of demilitarization will be verified if the applicant presents copies of the ATF Form 6 and ATF Form 6A that have been completed by the appropriate Department of Treasury officials. If the applicant is unable to produce an ATF Form 6 or 6A, the FAA certificating office should contact the ATF Firearms and Explosives Import Branch to determine if copies of these forms are available for the particular aircraft. In cases where the ATF Forms 6 or 6A are not required or not available, the FAA certificating office manager will determine the extent of demilitarization necessary prior to airworthiness certification.

**NOTE: Should there be any questions regarding ATF Forms 6 and 6A requirements, contact the ATF Firearms and Explosives Import Branch, Department of Treasury, phone number (202) 927-8320. Any changes to this phone number will be provided on electronic mail to all offices.**

**b. Records Inspection.** The FAA shall:

(1) Verify that the aircraft is properly registered in accordance with the requirements of 14 CFR part 47.

(2) Obtain from the applicant an FAA Form 8130-6, Application For Airworthiness Certificate, completed in accordance with FAA Order 8130.2.

(3) Obtain from the applicant a program letter in accordance with § 21.193(a), setting forth the purpose(s) for which the aircraft will be used. The program letter must be specific as to the intended use under the purpose requested, including which airshows, air races, or exhibition activities (including dates and locations) that will be attended. In the case of a movie or television production, the date(s) and location(s) of these productions must be provided. The applicant's program letter should state a reasonable schedule of events to be attended, but should not list events that would obviously be impossible to attend, e.g., listing all airshows scheduled in the United States for the upcoming year. Applicants should be advised that the program letter is subject to review by the FAA and that the owner/operator must notify the local FSDO by letter or facsimile transmission of any amendments to the proposed schedule prior to that flight.

**NOTE: Applicants that do not submit a specific program letter do not meet the intent of**

**§ 21.193 and shall not be issued a special airworthiness certificate.**

(4) Ensure that the applicant has written or translated into English language, the necessary maintenance, inspection, operating, and flight manual(s) to operate the aircraft safely.

(5) Verify that maintenance records reflect recordings of inspections, overhauls, repairs, time-in-service on life-limited parts and engines, etc., and that all records are current.

**NOTE: The requirements of 14 CFR part 91 § 91.409(e) are applicable via an operating limitation issued at the time of airworthiness certification for all turbine aircraft, regardless of weight. This requirement provides for the replacement of life-limited parts at a time specified in documents approved by the Administrator.**

(6) If the aircraft is a "Group II" or "Group IV" (only those aircraft over 12,500 lbs. and all turbine powered aircraft regardless of weight) aircraft as described in paragraph 8 of this order, verify that the applicant has a FSDO-approved inspection program that meets the requirements of § 91.409(e). (See appendix 2 of this order for inspection program information.)

**NOTE: An airworthiness certificate shall not be issued for these aircraft without a FSDO-approved inspection program.**

(7) Verify that the applicant has made an entry in the aircraft records to certify that an appropriately rated FAA-certificated mechanic has accomplished the applicable inspection (as defined in paragraph 8 of this order) within 30 days prior to the submittal of the FAA Form 8130-6.

**c. Aircraft Inspection.** The FAA will perform an inspection to the extent necessary to ensure that an inspection of the aircraft and aircraft systems has been accomplished in accordance with the inspection requirements as identified in paragraph 8 of this order. Additionally, the FAA will verify:

(1) That the aircraft's nationality and registration marks are in accordance with the requirements of 14 CFR part 45 of the FAR.

**NOTE: Reference § 21.182 (a) and (b) 2. This requires each aircraft to be identified as prescribed in § 45.11. In addition, it is acceptable to continue use of the duplicate pink copy of the**

**AC Form 8050-1 as temporary authority to operate if it is first verified with Oklahoma Aircraft Registry, that they have received the Aircraft Registration application, as temporary authority to operate.**

(2) That instruments, instrument markings, and placards are as required by the FAR and are identified in the English language. Verify that all measurements are converted to standard U.S. units of measure for those instruments necessary for operation in the U.S. air traffic system.

**NOTE: Depending on the intended operation under the applicable reference may be § 91.205(b), Visual Flight Rules (VFR) (day); § 91.205(c), VFR (night); or § 91.205(d), Instrument Flight Rules (IFR). Operators should be alerted that there are specific requirements under part 91 for maintenance and inspection of the various aircraft instruments and those requirements are applicable for these aircraft if the instruments are installed, e.g., §§ 91.173 through 91.187, 91.215, 91.217, 91.219, 91.411, 91.413, etc.**

### **3. AIRCRAFT EQUIPPED WITH EJECTION SEATS OR JETTISONABLE STORES.**

Former military turbine-powered aircraft certificated for the purpose(s) enumerated in paragraph 5.d. of this appendix may be eligible to operate with functional ejection seats. ONLY aircraft certificated for the purpose of research and development may be eligible to operate with functional jettisonable external fuel tanks or stores. The following requirements must be met in order to have these systems operational.

a. The applicant must provide objective evidence that the airport manager of the airport where the aircraft is based has been notified regarding the presence of explosive devices in these systems and the planned operation of an experimental aircraft from that airport.

b. Jettisonable external fuel tank(s) or stores systems must be maintained in accordance with manufacturer's procedures and inspected in accordance with the provisions of the FSDO-approved inspection program for the particular aircraft. The FAA will verify that there is a records entry indicating current serviceability of the jettison system(s).

c. Ejection seat systems must be maintained in accordance with manufacturer's procedures and inspected in accordance with the provisions of the FSDO-approved inspection program for the particular aircraft. The FAA will verify that there is a record entry

indicating current serviceability of the ejection system, including the status of any dated shelf-life items.

d. The applicant must have provisions for securing the aircraft to prevent inadvertent operation of the jettison and/or ejection systems whenever the aircraft is parked.

#### **4. CERTIFICATION PROCEDURES.**

a. Once it has been determined that the aircraft meets the requirements for the airworthiness certification requested, the FAA shall:

(1) Make an aircraft record entry showing the following or a similarly worded statement: **I find this aircraft meets the requirements for a Special Airworthiness Certificate for the purpose(s) of (identify purpose(s)) and have issued a Special Airworthiness Certificate and operating limitations dated (\_\_\_\_). The next inspection is due (\_\_\_\_). Signed: (John Doe, Aviation Safety Inspector, NM48).**

(2) Issue the airworthiness certificate, in accordance with this order and FAA Order 8130.2, with appropriate operating limitations.

b. If the aircraft does not meet the certification requirements and the airworthiness certificate is denied, the FAA will provide a letter to the applicant stating the reason(s) for denial and, if feasible, identify what steps may be accomplished to meet the certification requirements. Should this occur, a copy of the denial letter will be attached to FAA Form 8130-6 and forwarded to the Aircraft Registration Branch, AVN-750, and made a part of the aircraft's record.

#### **5. EXPERIMENTAL OPERATING LIMITATIONS (GENERAL).**

a. Section 91.319 prescribes operating limitations applicable to all aircraft having special airworthiness certificates issued under experimental.

b. Paragraph 6 of this appendix provides the minimum operating limitations that will be used when issuing a FAA Form 8130-7, Special Airworthiness Certificate, for these aircraft.

c. If an applicant requests a change to the aircraft's operating limitations, a new FAA Form 8130-7 is necessary and will require submission of a new FAA Form 8130-6.

d. Aircraft covered by this appendix are only eligible for

special airworthiness certification for the following experimental purposes:

(1) **Research and Development.** Operations permissible under this purpose are defined in § 21.191(a). Although the operations may eventually lead to type certification, they may be conducted by the applicant only as a matter of pure research or to determine whether an idea warrants further development. The duration of an airworthiness certificate for research and development will be effective for only the length of time reasonably required to accomplish the applicant's program, not to exceed one year.

(2) **Exhibition.** Operations permissible under this purpose are defined in § 21.191(d). Operating an aircraft to demonstrate its flight characteristics or capabilities in connection with sales promotions for the aircraft is not considered to be an eligible operation under exhibition. The duration of an airworthiness certificate for exhibition will be unlimited. However, when an aircraft base of operation is changed or there is a transfer of ownership the owner/operator will notify the local FAA FSDO having jurisdiction over the area in which the aircraft will be based. The owner/operator will provide the local FSDO with a copy of the inspection program identifying the person responsible for scheduling and performing the inspections.

(3) **Air Racing.** Operations permissible under this purpose are defined in § 21.191(e). A special airworthiness certificate for air racing should only be issued when an aircraft will be used for valid air racing purposes. The duration of an airworthiness certificate for air racing will be unlimited. However, when an aircraft base of operation is changed or there is a transfer of ownership the owner/operator will notify the local FAA FSDO having jurisdiction over the area in which the aircraft will be based. The owner/operator will provide the local FSDO with a copy of the inspection program identifying the person responsible for scheduling and performing the inspections.

e. Aircraft covered by this appendix would not normally be considered eligible for airworthiness certification for the following purposes:

(1) **Showing Compliance with Regulations.** Under § 21.191(b), this purpose is **ONLY** to be considered valid when an applicant is developing a product for type certification, a type certificate (TC) holder is revising the TC design data, or a modifier has applied for an STC or field approval.

(2) **Crew Training.** Under § 21.191(c), this purpose is limited to **ONLY** the applicant's flight crews, which normally would be the aircraft manufacturer's employees necessary to be trained in

experimental aircraft for subsequent operation of aircraft being flight tested in TC programs or for production flight testing.

(3) **Market Surveys.** Under § 21.191(f), a U.S. manufacturer of aircraft may apply for the purpose of market surveys, sales demonstrations, and customer crew training. Additionally, a manufacturer of aircraft engines who has altered a type certificated aircraft by installing different engines manufactured within the U.S. or a person who has altered the design of a type certificated, aircraft may apply for an experimental airworthiness certificate for the purpose of market surveys, sales demonstrations, and customer crew training.

**NOTE:** During the evaluation on exhibition aircraft, field offices were requested to send in copies of the special airworthiness certificates and operating limitations for exhibition aircraft that they had certificated. During the review of these certificates, several indicated that some offices may have issued special airworthiness certificates for inappropriate purposes. These aircraft do not meet the criteria stated in 5e (1), (2), and (3) and are not eligible for airworthiness certification for the purposes stated in paragraphs 5e(1), (2), and (3).

**6. GENERAL OPERATING LIMITATIONS FOR EXPERIMENTAL AIRCRAFT CERTIFICATED FOR THE PURPOSES OF RESEARCH AND DEVELOPMENT, EXHIBITION, AND/OR AIR RACING.**

a. The following is a list of operating limitations to be used when issuing an airworthiness certificate for the purpose(s) of research and development, exhibition, and/or air racing. Specific minimum operating limitations for aircraft certificated for the purpose(s) of exhibition and/or air racing are listed in paragraph 6.b. of this appendix. Minimum operating limitations for aircraft certificated for the purpose of research and development are listed in paragraph 6.c. of this appendix. All notes are provided for the FAA's information only and will not be part of the actual operating limitations. Additional limitations may be established on a case-by-case basis, if deemed necessary by the FAA, in the interest of safety.

**NOTE:** To ensure national standardization, the following operating limitations shall be issued using the text presented, as appropriate to the group of aircraft as defined in paragraphs 6b and c of this appendix.

(1) No person may operate this aircraft unless the FAA

Form 8130.7, Special Airworthiness Certificate, is displayed at the cabin or cockpit entrance so that it is visible to passengers or crew.

(2) No person may operate this aircraft for other than the purpose of meeting the requirements of § 91.319 (b), as stated in the program letter for this aircraft. Additionally, this aircraft shall be operated in accordance with applicable air traffic and general operating rules of part 91 and all additional limitations herein prescribed under the provisions of § 91.319(e). These operating limitations are a part of the FAA Form 8130-7, Special Airworthiness Certificate, and are to be carried in the aircraft at all times for availability to the pilot.

(3) This aircraft may only operate from (identify name of outlying airport) until the requirements of § 91.319(b) have been met. The operator will use the following described corridor to transition to that airport (enter description of the corridor). After meeting the requirements of § 91.319(b), the aircraft may return to (enter home base airport name) but the established corridor will be used for all subsequent operations.

**NOTE: This limitation will be used when the aircraft's home base is located in a densely populated area and/or in a congested airway.**

(4) No person may operate this aircraft for other than the purpose of Research and Development to accomplish the tests outlined in (identify applicant) letter dated (\_\_\_\_\_), describing compliance with § 21.193(d). Additionally, this aircraft shall be operated in accordance with applicable air-traffic and general operating rules of part 91, and all additional limitations herein prescribed under the provisions of § 91.319(e). These operating limitations are a part of the FAA Form 8130-7, Special Airworthiness Certificate, and are to be carried in the aircraft at all times for availability to the pilot.

(5) This aircraft shall be operated for at least (\_\_\_\_\_) hours with at least (\_\_\_\_\_) takeoffs and landings (to a full stop) in the geographical area described as follows:

**NOTE: This geographical area, must be over open water or sparsely populated areas having light air traffic. The size of the area shall be that required to safely conduct the type of anticipated maneuvers and tests. The area shall be described by radius, or coordinates, and/or landmarks. The minimum hours and maximum takeoffs and landings should be based on the aircraft condition, records, and total time on the aircraft and engine(s). To ensure national standardization, when issuing**



this limitation for turbine powered aircraft, the maximum hours should not normally exceed 10 and the minimum takeoffs and landings should be at least 3.

(6) Application must be made to the geographically responsible Flight Standards District Office for any revision to these operating limitations.

(7) This aircraft may not be operated over densely populated areas or in congested airways, except when otherwise directed by Air Traffic Control.

NOTE: Special operating limitations for particular aircraft to permit takeoffs and landings may be authorized in accordance with § 91.319(c). The certificating inspector should consult with a FSDO operations inspector in order to determine if takeoffs and landings should be authorized. If authorization is given, then the operating limitation will read as follows: "(7) Except for takeoffs and landings, this aircraft may not be operated over densely populated areas or in congested airways, except when otherwise directed by Air Traffic Control or in an emergency situation. When exercising this authorization, the pilot-in-command must request a departure route that will avoid densely populated areas and congested airways whenever possible." The FAA certificating inspector will coordinate with the local FSDO operations unit to establish departure/approach corridors that ensure hazards to which persons and property are subjected, and exposure of persons to aircraft noise, are minimized. THIS CONCEPT OF A DEPARTURE/APPROACH CORRIDOR SHALL BE UTILIZED WHEN ISSUING OPERATING LIMITATIONS FOR AIRCRAFT THAT ARE BASED AT AIRPORTS WITHIN CLASS B AIRSPACE. ESTABLISHED CORRIDORS WILL BE USED FOR ALL PROFICIENCY FLIGHTS AND EVENT ATTENDANCE.

(8) This aircraft is to be operated under Visual Flight Rule, day only.

(9) No person may be carried during flight unless that person is essential to the purpose of the flight.

(10) No person may operate this aircraft for carrying persons or property for compensation or hire.

(11) Aerobatic maneuvers intended to be performed must be satisfactorily accomplished and recorded in the aircraft records during the flight test period.

**NOTE: In addition to the requirements of § 91.303, appropriate limitations identifying the aerobatic maneuvers and conditions under which they may be performed shall be prescribed. The FAA may witness aerobatic maneuvers if deemed necessary.**

(12) This aircraft will not be operated unless the replacement times for life-limited parts specified in the applicable technical publications pertaining to the aircraft and its components are complied with. This aircraft, including its related components and systems, must be inspected in accordance with an approved inspection program selected under the provisions of § 91.409(e). This inspection program shall be recorded in the aircraft maintenance records.

**NOTE: The procedures for approval of this program are described in appendix 2 of this order.**

(13) Inspections shall be recorded in the aircraft maintenance records showing the following or a similarly worded statement: **I certify that this aircraft has been inspected on (insert date) in accordance with the scope and detail of the (identify program title) FSDO-approved program dated (\_\_\_\_), and found to be in a condition for safe operation.** The entry will include the aircraft total time in service (cycles if appropriate); and the name, signature, and certificate type/number of the person performing the inspection.

(14) This aircraft shall not be operated unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with appendix D of part 43 and found to be in a condition for safe operation. This inspection will be recorded in the aircraft maintenance records.

(15) Condition inspections shall be recorded in the aircraft maintenance records showing the following or a similarly worded statement: **I certify that this aircraft has been inspected on (insert date) in accordance with the scope and detail of appendix D of 14 CFR part 43 and found to be in a condition for safe operation.** The entry will include the aircraft total time in service, the name, signature, and certificate type and number of the person performing the inspection.

(16) This aircraft shall not be operated unless it is maintained and inspected in accordance with appropriate military

technical publications or manufacturer's instructions for the aircraft.

(17) Inspections shall be recorded in the aircraft maintenance records showing the following or a similarly worded statement: **I certify that this aircraft has been inspected on (insert date) in accordance with the scope and detail of (identify military technical publications and/or manufacturer's instructions) and found to be in a condition for safe operation.**

(18) This aircraft shall not be operated unless it is maintained and inspected in accordance with the requirements of part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alteration.

**NOTE: This operating limitation is applicable for any aircraft that previously had been issued a different kind of airworthiness certificate prior to applying for a special airworthiness certificate (Reference part 43 § 43.1(b)).**

(19) Only FAA-certificated mechanics with appropriate ratings as authorized by § 43.3 may perform inspections required by these limitations.

(20) The cognizant FAA FSDO must be notified, and their response received in writing, prior to flying this aircraft after incorporation of a major change as defined by § 21.93.

(21) This aircraft must display the word **EXPERIMENTAL** in accordance with § 45.23(b).

(22) This aircraft shall contain the placards, markings, etc., required by § 91.9.

(23) The Pilot In Command of this aircraft must hold an appropriate category/class rating. If required for the type of aircraft to be flown, the Pilot In Command must also hold either an appropriate type rating or a Letter of Authorization issued by an FAA Flight Standards Operations Inspector.

**NOTE: A Letter of Authorization is issued in accordance with the procedures described in appendix 3 of this notice. This operating limitation is not applicable to glider aircraft.**

(24) The Pilot In Command of this aircraft shall notify the air traffic control tower of the experimental nature of this aircraft when operating into or out of airports with operating control towers. The Pilot In Command shall plan routing that will avoid densely

populated areas and congested airways when operating VFR.

(25) The Pilot In Command of this aircraft should be knowledgeable of and utilize the procedures described in the Experimental Aircraft Association's "Jet Operations Manual" or other procedures acceptable to the Administrator.

(26) The ejection seat system must be maintained in accordance with the manufacturer's procedures and inspected in accordance with the Flight Standards District Office-approved program entitled (identify program title) dated (enter approval date).

(27) The ejection seat system must be secured to prevent inadvertent operation of the system whenever the aircraft is parked.

(28) All systems that provide a means of inflight jettison of external stores must be maintained in accordance with the manufacturer's procedures and inspected in accordance with the Flight Standards District Office-approved program entitled (identify program title) dated (enter approval date).

**NOTE: Inflight jettison systems are only allowed to be operational on aircraft used for the purpose of research and development.**

(29) External store(s) system(s) must be secured to prevent inadvertent operation of these systems whenever the aircraft is parked.

(30) This aircraft is prohibited from flight with any externally mounted equipment unless the equipment is permanently installed (in a manner that will prevent inflight jettison of the equipment). This permanent installation must be recorded in the aircraft records.

(31) Following satisfactory completion of the required number of flight hours in the flight test area, the pilot shall certify in the records that the aircraft has been shown to comply with § 91.319(b). Compliance with § 91.319(b) shall be recorded in the aircraft records with the following or a similarly worded statement: **I certify that the prescribed flight test hours have been completed and the aircraft is controllable throughout its range of speeds and throughout all maneuvers to be executed, has no hazardous operating characteristics or design features, and is safe for operation.**

(32) No person may operate this aircraft for other than the purpose(s) of (identify purpose(s)), to exhibit the aircraft, or participate in events outlined in (identify applicant) program letter (or any amendments) describing compliance with § 21.193(d). Additionally, this aircraft shall be operated in accordance with

applicable air traffic and general operating rules of part 91, and all additional limitations herein prescribed under the provisions of § 91.319(e). These operating limitations are a part of the FAA Form 8130-7, Special Airworthiness Certificate, and are to be carried in the aircraft at all times for availability to the pilot.

(33) All proficiency/practice flights shall be conducted within the geographical area described in the aircraft program letter and any amendments to that letter, but that area will not exceed 300 nautical miles of the aircraft home base airport. An exception is permitted for proficiency flying outside of the area stated above for organized formation flying, training, or checkout in conjunction with a specific event listed in the aircraft program letter (or amendments). The program letter should indicate the location and dates for this proficiency flying.

(34) All proficiency/practice flights shall be conducted within the geographical area described in the aircraft program letter and any modifications to that letter, but that area will not exceed 600 nautical miles of the aircraft home base airport. Proficiency flights are limited to a non-stop flight that begins and ends at the home base airport with sufficient fuel reserve to meet the applicable operating rules of part 91. Anytime an alternate airport within the 600 nautical mile radius is selected, the operator must notify their geographically responsible Flight Standards District Office prior to each proficiency flight away from their home base airport. An exception is permitted for proficiency flying outside of the area stated above for organized formation flying, training, or checkout in conjunction with a specific event listed in the aircraft program letter (or amendments). The program letter should indicate the location and dates for this proficiency flying.

(35) All proficiency/practice flights shall be conducted within the geographical area described in the aircraft program letter and any modifications to that letter, but that area will not exceed 600 nautical miles of the aircraft home base airport. An exception is permitted for proficiency flying outside of the area stated above for organized formation flying, training, or checkout in conjunction with a specific event listed in the aircraft program letter (or amendments). The program letter should indicate the location and dates for this proficiency flying.

(36) All proficiency/practice flights shall be conducted within the geographical area described in the aircraft program letter and any modifications to that letter, but that area will not exceed 300 nautical miles of the aircraft home base airport. Proficiency flights are limited to a non-stop flight that begins and ends at the aircraft home base airport. An alternate airport selection is not permitted for this aircraft. However, an exception is permitted for proficiency flying outside of the area stated above for organized formation flying, training, or checkout in conjunction with a

specific event listed in the aircraft program letter (or amendments). The program letter should indicate the location and dates for this proficiency flying.

(37) Proficiency flights are authorized without geographical restrictions defined for Group I aircraft, as necessary, when conducted in preparation for participation in sanctioned meets and pursuant to qualify for Federal Aeronautique International (FAI) or Soaring Society of America (SSA) awards. These flights may only take place as defined in the aircraft program letter, and prior to the specific FAI or SSA event. The PIC must submit a description of the intended route and/or geographical area intended to be flown to their local Flight Standards District Office.

(38) This aircraft is restricted to airports that are within airspace classes C, D, E, and G during proficiency flights, except in the case of a declared emergency or when otherwise directed by Air Traffic Control.

(39) The owner/operator of this aircraft must submit an annual program letter update to the local Flight Standards District Office that lists airshows, fly-ins, etc. that will be attended during the next year, commencing at the time this aircraft is released into Phase 2 operation. This list will be subject to amendments, as required, by letter or facsimile transmission.

(40) The owner/operator of this aircraft must ensure that a copy of the current program letter, any amendments, and a copy of the highlighted aeronautical chart, are carried aboard this aircraft at all times.

(41) This aircraft is authorized for flights at air shows or air races conducted under a waiver (if required) issued in accordance with § 91.903.

(42) This aircraft must be operated VFR, Day only, unless equipped for night and/or instrument flight in accordance with § 91.205.

**NOTE: Section 91.319(d)(2) provides for VFR, day only, unless otherwise specifically authorized by the Administrator. If other operations are requested, the aircraft must be equipped in accordance with the applicable requirements of § 91.205.**

(43) No person may be carried in this aircraft during the exhibition of the aircraft's flight capabilities, performance, or unusual characteristics at air shows, motion picture, television, or similar productions, unless essential for the purpose of the flight.

Passengers may be carried during flights to and from any event outlined in the program letter or during proficiency flying, limited to the design seating capacity of the aircraft.

(44) The Pilot In Command of this aircraft shall advise each person carried of the experimental nature of this aircraft.

(45) Aerobatic maneuvers that have been recorded during flight test may be performed.

(46) This aircraft is prohibited from flight with any externally mounted equipment unless the equipment is permanently mounted in a manner that will prevent inflight jettison, and there is a notation in the aircraft records indicating flight testing has been accomplished with this equipment installed.

(47) Supersonic flight (true flight Mach number greater than 1) is prohibited unless specifically authorized under § 91.817.

(48) These operating limitations and airworthiness certificate will bear no expiration date. However, when an aircraft base of operation is changed or there is a transfer of ownership the new owner/operator will provide the local Flight Standards District Office with a copy of the approved inspection program identifying the person responsible for scheduling and performing the inspections.

(49) This aircraft shall not be used for glider towing, banner towing, or intentional parachute jumping.

(50) This aircraft does not meet the requirements of the applicable, comprehensive, and detailed airworthiness code as provided by Annex 8 of the International Convention of Civil Aviation. The owner/operator of this aircraft must obtain written permission from another country's Civil Airworthiness Authority (CAA) prior to operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the CAA in the country of operation.

(51) In accordance with § 47.45, the FAA Aircraft Registry must be notified within 30 days for any change of the aircraft registrant's address. Such notification is to be made in the form of a submission of an FAA Form 8050-1, Aircraft Registration Application.

(52) Aircraft instruments and equipment installed and used under § 91.205 must be inspected and maintained in accordance with the requirements for those instruments found in parts 43 and 91.

(53) Flights to maintenance facilities located inside or

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outside the proficiency area to have maintenance performed are allowed. For facilities outside the proficiency area stated in the operating limitations, identify the operating limitation number. The owner operator must notify and receive permission from the geographically responsible FSDO prior to flight. The maintenance performed must be recorded in the aircraft records.

**NOTE: The geographically responsible FSDO and the local area FSDO office where the maintenance will take place, must concur prior to approving the flight request.**

b. Notwithstanding the certification requirements contained in the current revision of FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Approvals, an FAA inspector may elect to process these aircraft on a one-time certification basis, e.g., via the issuance of only one special airworthiness certificate of unlimited duration. In these instances, when issuing the special airworthiness certificate for the purpose(s) of exhibition and/or air racing, the operating limitations will be prescribed in two phases in the same document.

(1) For Phase 1 limitations, the certificating inspector will prescribe all those operating limitations under paragraph 6.a. of this appendix, as appropriate, for the applicant to demonstrate compliance with § 91.319(b) in the assigned flight test area. The following identification of operating limitations found in paragraph 6.a. of this appendix are based on the four groups identified in paragraph 8 of this order.

(2) Minimum Phase 1 operating limitations for all aircraft, regardless of group designation will be as follows: 1, 2, 3 (if applicable), 5, 6, 7, 8, 9, 10, 11, 18 (if applicable), 19, 20, 21, 22, 24, 31, 40, 50, 51, 52, and 53.

(a) Additional specific Phase 1 operating limitations for aircraft operating under Group I include limitations 14, 15 and 23 (if applicable).

(b) Additional specific Phase 1 operating limitations for aircraft operating under Group II include operating limitations 12, 13, 23, 25, 26, 27, and 30.

(c) Additional specific Phase 1 operating limitations for aircraft operating under Group III include operating limitations 14 and 15 (if under 800 hp), or 16 and 17 (if 800 hp or above), and 23 (if applicable).

(d) Additional specific Phase 1 operating limitations for aircraft operating under Group IV include limitations 12 and 13



(if jet powered or over 12,500 lbs.), or 14 and 15 (all other aircraft), and 23 (if applicable).

(3) In order to operate under Phase 2 operating limitations, the operator must make a signed entry (described in limitation 31) attesting to meeting the requirements of § 91.319(b).

(4) For Phase 2 limitations, the certificating inspector will prescribe all those operating limitations under paragraph 6.a. of this appendix, as appropriate, to allow the applicant to operate the aircraft outside of the designated flight test area. The following identification of operating limitations found in paragraph 6.a. of this appendix is based on the four groups identified in paragraph 8 of this order.

(5) Minimum Phase 2 operating limitations for all aircraft, regardless of group designation will be as follows: 1, 6, 7, 10, 18 (if applicable), 19, 20, 21, 22, 24, 32, 38, 39, 40, 41, 42, 43, 44, 45, 49, 50, 51, 52, and 53.

(a) Additional specific Phase 2 operating limitations for aircraft operating under Group I include limitations 14, 15, and 23 (if applicable) and limitations 33 and 37 (gliders only).

(b) Additional specific Phase 2 operating limitations for aircraft operating under Group II include limitations 12, 13, 23 (if applicable), 25, 26, 27, 30, 34, 46, 47, and 48.

(c) Additional specific Phase 2 operating limitations for aircraft operating under Group III include limitations 14 and 15 (if under 800 hp), or 16 and 17 (if 800 hp or above), 23 (if applicable), and 33 (if under 800 hp) or 35 (if 800 hp or above).

(d) Additional specific Phase 2 operating limitations for aircraft operating under Group IV include limitations 12 and 13 (if turbine-powered or over 12,500 lbs.), or 14 and 15 (all other aircraft), 23 (if applicable), 25, 36, 47, and 48 (if applicable).

c. Minimum operating limitations for aircraft certificated for the purpose of research and development include limitation 1, 4, 5, 6, 7, 9, 10, 12 and 13 (if turbine-powered) or 14 and 15 (if not turbine-powered), 18 (if applicable), 19, 20, 21, 22, 23 (if applicable), 24, 25 (if turbine-powered), 26 and 27 (if equipped with ejection seats), 28 and 29 (if equipped with jettisonable stores), 40, 42, 47, 50, 51, and 52.



**APPENDIX 2. INSPECTION PROGRAMS FOR EXPERIMENTAL  
AIRCRAFT THAT ARE TURBINE-POWERED OR OVER 12,500lbs.**

**1. PURPOSE.** This appendix contains information and guidance concerning inspection programs that are required during certification and prior to operating these experimental aircraft.

**2. DEFINITIONS.** The following definitions are terms that may be used in the development of inspection programs for these aircraft.

a. **Overhaul.** Methods, techniques, or practices for disassembling, cleaning, inspecting, repairing as necessary, reassembling, and testing in accordance with approved standards and technical data acceptable to the Administrator. Overhaul should not be confused with life-limit.

b. **Life-limit.** The finite/retirement time assigned to a component that requires the removal of that component from service.

c. **Shelf-life.** A recommended time determined by the manufacturer for removal of a component from service.

**3. INSPECTION PROGRAM SUBMITTAL REQUIREMENTS.** The applicant should submit the following material for review:

a. **Proposed Inspection Program.** The submitted program for an aircraft may be a current manufacturer's; current military; an owner/operator developed program; or it can be based on one previously approved for the same make/model. Prior FAA approval of an inspection program does not guarantee an automatic approval for a similar make/model because inspection programs are aircraft specific and will be identified by the aircraft serial number. Inspection programs are subject to amendment whenever significant changes in operating environment and/or equipment occurs.

b. **Operable Ejection Seats.** The inspection program for operable ejection seats will be based on a current manufacturer's or current military developed program, and will include replacement intervals for shelf-life components, such as pyrotechnic cartridges.

**NOTE:** When an aircraft base of operation is changed, the owner/operator will notify the local FAA FSDO having jurisdiction over the area in which the aircraft is based. If an aircraft with an approved inspection program is sold, the new owner/operator will provide the FSDO with a copy of the approved inspection program identifying the person responsible for scheduling and performing the inspections.

c. **Required Manufacturer/military Manuals.** If the manuals were not originally published in English, the applicant will submit an English translation of the original manuals. It is to the applicant's benefit to ensure that the translation is performed by a technically competent individual familiar with aviation terms and practices.

d. **Extension of Component Life-limits.**

(1) The applicant may submit data (review by an FAA Designated Engineering Representative is encouraged), with a request to the Aircraft Certification Office (ACO), that could extend the life-limit on specific components of the aircraft beyond the manufacturer's, military, and/or technical order recommended life-limits. This data and inspection procedure, if approved by the ACO, will be submitted to the local FSDO to be included into the FSDO-approved inspection program for the aircraft. As a minimum, the data submitted by the applicant should contain the following:

(a) The original strength, stress, and fatigue data for the aircraft and the pertinent parts, including other parts which may be affected by changes of the life-limits and inspection intervals;

(b) The methodology the designers used while developing the life-limits and inspection intervals;

(c) The operational history of the aircraft and parts (usage affects life-limits and inspection intervals);

(d) The service history of the aircraft and pertinent parts, including any repairs and modifications which affect the strength, stress, and fatigue characteristics of the parts and their affects upon the parts' life-limits and inspection intervals;

(e) How the present operational usage differs from prior military usage;

(f) That the applicant's inspection/testing techniques, e.g., NDI/NDT, are comparable to those used by the military;

(g) That the methodology chosen by the owner (e.g., damage tolerance with inspections versus safe-life with automatic removal) produces at least as safe a product as the military's approach.

(h) The request must include a procedure to inspect the component to some appropriate physical standard and should include non-destructive testing, where applicable.

(i) This data and inspection procedure, if approved by the ACO, will be submitted to the local FSDO to be included in the FAA-approved inspection program.

(2) In cases where the data mentioned in paragraph 3d(1) is unavailable or cannot be substantiated, the components will not be eligible for any extension of life-limits.

e. **Extension of Component Recommended Overhaul Times.** The owner/operator may elect to continue in service any component that has reached its recommended overhaul time providing an approved inspection is implemented which includes a procedure to inspect the component to an appropriate physical standard with a definitive time period for review. Testing to the standard may be accomplished in place where practicable. This inspection procedure will be submitted to the local FSDO to be included in the FAA approved inspection program.

#### **4. INSPECTION PROGRAM CONTENT.**

a. The owner/operator developed inspection program presented for FAA approval should reference specific details from the appropriate military/manufacturer's manuals while encompassing the scope and detail of part 43, appendix D, as appropriate.

b. As an alternative, a military/manufacturer's inspection program may be adopted and presented for FAA approval. Specific irrelevant sections may be deleted for aircraft systems that have been removed or deactivated.

**NOTE: Although part 43, appendix D, refers to annual and 100-hour inspections, the applicant is not limited to these time and hour requirements. However, all inspection programs will provide for a complete inspection of the aircraft within the preceding 12 calendar months.**

c. The following items should be a part of an approved inspection program:

(1) Title page that includes the aircraft manufacturer's name and the aircraft model, serial number, and registration number to which the inspection program applies; and the owner/operator's name and address.

(2) Table of contents;

(3) Log of revisions;

(4) Method of revision;

(5) List of effective pages;

(6) Introduction that includes the following:

(a) A description of the inspection program with references to the sections of the supporting documents to include standards of performance, procedures, methods, instructions, or other technical data. If the references are not specified by title, page, and revision, the documents in their entirety become a part of the inspection program.

(b) A statement that this inspection will be performed to ensure that the aircraft is in a condition for safe operation and that the inspection is performed in accordance with the procedures of the program.

(c) Identification of the individual responsible for scheduling and performing the inspections, including their name and address.

(d) A listing of the specific maintenance/inspection manuals for the make and model of the aircraft being certificated.

(7) Program unique definitions and/or acronyms.

(8) A replacement schedule of life-limited/retirement items, if applicable.

(9) Procedures to ensure that inspection records are kept and that the following information is included:

(a) Date of inspection;

(b) Name and certificate number of the person performing the inspection;

(c) Type of inspection; and

(d) Total time of the component being inspected expressed in cycles, calendar time, hours, or any combination of these.

(10) Instructions and procedures for the conduct of inspections for the particular make and model of aircraft including necessary tests and checks. The instructions and procedures must set forth in detail the parts and areas of the airframe, engines, propellers, and appliances required to be inspected, including survival and emergency equipment.

(11) A schedule for performing the required inspections under the program as expressed in terms of time-in-service, calendar time, number of system operations, or any combination of these. It should also include low-utilization inspections.

(12) Additional procedures that should be included in the instructions and procedures may include:

(a) Special Inspections such as short and long term storage/out of service inspections, hard landing inspections, structural inspections, etc.

(b) Compliance with service letters, service bulletins, time compliance technical orders, and airworthiness directives; and the method to insure compliance.

(c) Corrosion inspections.

(d) Any other inspection that may be required due to unusual environmental operations or aircraft design, such as composite construction.

**5. INSPECTION PROGRAM APPROVAL.** Approval of the inspection program will be indicated on the cover page. Include the date of approval, the inspector's signature, the office name, number, and location. Stamp each succeeding page with the district office stamp, date, and initials of the inspector.

**6. MAINTENANCE REQUIREMENTS.** The owner/operator of the aircraft will have the inspections performed as prescribed in the approved program and will, between inspections, have discrepancies repaired in accordance with the appropriate manufacturer/military manuals, instructions, and technical orders.

**7. MAINTENANCE RECORDS.** The owner/operator shall keep the records required under part 91 § 91.417 as applicable to the aircraft.





**APPENDIX 3. PILOT QUALIFICATION AND OPERATION OF TURBINE POWERED AIRCRAFT, LARGE AIRCRAFT, OR PISTON-POWERED AIRCRAFT GREATER THAN 800 HP AND Vne EXCEEDING 250 KNOTS**

**1. PURPOSE.** This appendix provides guidance for qualifying pilots to operate turbine powered aircraft, large aircraft, or piston powered aircraft having more than 800 HP and a Vne (never-exceed speed) that exceeds 250 KIAS under a letter of authorization (LOA), as required by operating limitations issued for this type of aircraft.

**2. DEFINITIONS.**

a. **Aircraft Type.** As used in this appendix, means a specific make and basic model, e.g., Mikoyan MiG-15 or Douglas A-4.

b. **Comparable.** As used in this appendix, means aircraft with similar characteristics. Some characteristics to consider when determining comparability of aircraft are straight-wing versus swept wing, subsonic versus supersonic, gross weight, and number of engines.

c. **Letter of Operational Authority.** A letter of operational authority issued by the FAA may allow an individual to evaluate an applicant's knowledge and flight proficiency and to provide a recommendation to the FAA for the issuance of an LOA. In addition, the holder of a letter of operational authority may endorse an existing LOA holder for continued solo flight after a period of 6 calendar months of inactivity.

d. **Surplus Military Aircraft.** As used in this appendix, unless otherwise stated, applies to both turbine-powered and piston-powered surplus military aircraft.

e. **Piston-Powered Aircraft.** As used in this appendix, means an aircraft with over 800 hp and Vne that exceeds 250 knots.

**3. BACKGROUND.**

a. Operating limitations issued for experimental aircraft may require the pilot-in-command to either obtain an LOA from the FAA or hold a type rating on their pilot certificate when an aircraft type rating has been established.

b. Type ratings for certain aircraft are required by 14 CFR part 61 section 61.31(a). The FAR requires type ratings for large aircraft or turbine-powered aircraft when they have been certificated in the standard category. Section 61.31(h)(3) provides an exception for type ratings for operation of aircraft certificated

in the experimental or provisional category.

**4. ELIGIBILITY.** To be eligible for an LOA to serve as PIC, an applicant must:

a. Possess at least a private pilot certificate with appropriate category and class rating (such as airplane, single-engine land).

b. Meet the flight experience eligibility requirements. The applicant is only required to meet one of the following two methods in order to meet the experience requirements for turbine-powered aircraft:

(1) The applicant must have logged a minimum of 1,000 hours pilot flight time, including 500 hours as PIC in the aircraft category; or

(2) The applicant must have logged a minimum of 500 hours pilot flight time in the aircraft category and have completed the U.S. armed services qualification checkout, or manufacturer's training and qualification program as specified under the general training requirements, paragraph 7a of this appendix.

c. Have logged a minimum of 500 hours of pilot flight time to serve as PIC of a piston-powered aircraft.

d. Possess at least a valid third-class FAA medical certificate.

**5. APPLICATION PROCEDURES.**

a. An applicant shall submit an application letter and an FAA Form 8710-1, Airman Certificate and/or Rating Application, to the FSDO where the applicant resides or in the area where the flight(s) will begin at least 30 days before the date of the first intended operation. The application letter shall include at least the following information:

(1) The name of the applicant.

(2) The current address of the applicant and a telephone number where the applicant can be reached during normal business hours.

(3) The grade of the applicant's pilot certificate, number, rating(s), and limitations, along with a description of the pilot's background and hours of experience in the type of aircraft involved or a similar type aircraft.

(4) The pilot's plan for transition training to the specific aircraft, including ground, flight, and simulator training if

applicable. Minimum standards for such training are specified under general training requirements, paragraph 6 of this appendix.

(5) The date and class of FAA airman medical certificate held, including any limitations, and whether the pilot applicant has had high altitude physiological training, including the date of such training, as appropriate.

(6) The make, model, and manufacturer of the aircraft to be flown.

(7) The name of the airport where the aircraft will be based and a description of the proposed flight, or series of flights, including the purpose, airport of departure, airports of intended use enroute, and airport of destination, as applicable.

(8) The portions of the aircraft operating manual that includes the operating limitations for that aircraft and its current airworthiness status.

b. Once the application, including the applicant's proposed training plan has been received by the FSDO, an FAA inspector will review the application and advise the applicant whether the application is acceptable or whether revisions and/or amendments are necessary.

**6. GENERAL TRAINING REQUIREMENTS.** The FAA requires documented evidence of appropriate training. The training which the applicant receives should be obtained from the most complete program available. For example, the manufacturer, the military, or outside contractors may be potential sources for ground, simulator, or flight training. The EAA has developed a Jet Operations Manual, including suggestions and recommendations for civilian jet operations creating a positive image and noise abatement procedures. The FAA encourages persons considering operating surplus military aircraft to become familiar with and use the procedures such as those outlined in the EAA's Jet Operations Manual.

a. To act as PIC in the particular type aircraft or in a "comparable" surplus military type fighter or attack aircraft, the applicant is required to show evidence of completion of an appropriate U.S. military service qualification checkout (U.S. Air Force F-86, U.S. Navy A-4, etc.). The applicant must also show evidence of having flown as PIC of a turbine or piston-powered aircraft, as applicable, within the preceding 3 calendar months and logged 10 hours as PIC in the particular type aircraft or a "comparable" type aircraft during the preceding 12 calendar months.

b. The applicant may show evidence of satisfactory completion of the manufacturer's PIC qualification checkout in the particular type aircraft. In such case, the applicant must provide a copy of the

manufacturer's training program curriculum.

c. If the above methods of training are not available, the applicant may provide an endorsement by the holder of a current and appropriate Letter of Operational Authority in that type aircraft, who has also been authorized in writing by the FAA to make the endorsement that ground instruction has been given and that the applicant is adequately knowledgeable of:

(1) The aircraft's systems and components.

(2) Normal and emergency procedures, including the use of ejection seats if such seats are operational (abnormal if described in the aircraft's checklist).

(3) Use of performance charts including, but not limited to, takeoff, climb, cruise, descent, and landing.

(4) Fuel requirements and management.

(5) Runway requirements and limitations (minimum length and crosswind limits of the aircraft).

(6) Contents of the aircraft flight manual or equivalent.

(7) Operating limitations prescribed for the particular aircraft, including the adverse effects of exceeding any limitation.

(8) Operation of the aircraft in the high altitude regime, if applicable.

Instruction will be given in the Areas of Operation and the applicable Tasks, and standards of performance required will be that shown in the Airline Transport Pilot and Type Rating Practical Test Standards, FAA-S-8081-5 (as amended).

d. In addition to the knowledge requirements of subparagraph c of this appendix, the applicant must present an endorsement by the holder of a current and appropriate LOA in that type aircraft, who has been authorized in writing by the FAA to make the endorsement that they have personally flown with the applicant in the type aircraft for multiple-place or a comparable aircraft for single-place and has found the applicant competent to perform safely the following:

(1) Aircraft preflight.

(2) Cockpit resource management, as appropriate.

- (3) Powerplant start procedure, taxiing, and pre-takeoff checks.
- (4) Takeoffs and landings (normal, crosswind, and arrestment procedures), as applicable.
- (5) Aborted takeoffs.
- (6) Flight at critically slow airspeeds.
- (7) Approaches to stalls (if appropriate to the aircraft used).
- (8) Recovery from specific flight characteristics.
- (9) Normal and emergency procedures (abnormal if described in the aircraft's checklist).
- (10) Maneuvering to landings with simulated powerplant failure, multi-engine aircraft.
- (11) Zero-flap landings, as appropriate.
- (12) Rejected landings.
- (13) Aerobatics - if appropriate to the aircraft and requested by the applicant, and if the applicant does not wish to have the limitation, "Aerobatic maneuvers are not authorized" placed on their LOA.

Instruction will be given in the Areas of Operation and the applicable Tasks, and standards of performance required will be that shown in the Airline Transport Pilot and Type Rating Practical Test Standards, FAA-S-8081-5 (as amended).

e. The applicant may propose a written training program curriculum of their own choice and design. The training program curriculum should provide transition ground and flight training appropriate to the aircraft and consist of the Areas of Operation and the applicable Tasks shown in the Airline Transport Pilot and Type Rating Practical Test Standards, FAA-S-8081-5 (as amended). The training program shall ensure that the applicant, after satisfactorily completing the proposed training program, will have received training at least equal in scope and content to that contained in paragraphs 6a or b, or c and d of this appendix.

f. Some single-place military surplus aircraft have two-place models that may be available for the applicant's use in training. An applicant with a single-place aircraft, e.g., MiG-15, must accomplish the training required by this appendix. However, the applicant may

accomplish that training in a comparable two-place aircraft, e.g., T-33. In determining what constitutes a comparable two-place aircraft for training purposes and for issuing authorizations for single-place aircraft, the FAA requires the applicant to receive training in the most complex airplane that most nearly duplicates the characteristics of the single place model.

g. A temporary LOA to fly a multiple-place or single-place aircraft may be granted for proficiency and practice flying in preparation for the practical tests required by this appendix. This temporary LOA may be issued on the basis of the applicant having satisfactorily completed the appropriate training program. This temporary LOA shall be valid for a maximum period of 60 days and shall be limited to flights in a prescribed geographical area. This temporary LOA may be reissued for an additional 60 days if the applicant can show that he/she was prevented from proficiency and practice flying by circumstances beyond their control, such as weather or mechanical problems. In any case, the applicant must comply with the aircraft's airworthiness limitations, as amended.

#### **7. PRACTICAL TEST - MULTIPLE-PLACE AIRCRAFT.**

a. After the applicant has satisfactorily completed the proposed training program which was deemed acceptable to the FAA, a demonstration of the applicant's knowledge and flight proficiency will not be required (for VFR flight only) if the applicant has accomplished one of the following:

(1) Has satisfactorily completed the appropriate U.S. military service qualification as outlined in paragraph 6a of this appendix and has shown evidence of having flown as PIC of any turbine or piston-powered aircraft, as applicable, within the preceding 3 calendar months and logged 10 hours as pilot in command in the particular type aircraft or in a "comparable" type fighter or attack aircraft during the preceding 12 calendar months; or

(2) Has satisfactorily completed the training and was endorsed by the holder of a current and appropriate Letter of Operational Authority as outlined in paragraphs 6c and 6d of this appendix.

b. After the applicant has satisfactorily completed the proposed training program which was deemed acceptable to the FAA, a demonstration of the applicant's knowledge and flight proficiency will be required (for VFR flight only) if the applicant has done one of the following:

(1) Has satisfactorily completed the appropriate military service qualification as outlined in paragraph 6a of this appendix, but has not flown as pilot in command of any turbine or piston-

powered aircraft, as applicable, within the preceding 3 months and has not logged 10 hours as pilot in command in the particular type aircraft or in a "comparable" type fighter or attack aircraft during the preceding 12 calendar months;

(2) Has satisfactorily completed the manufacturer's PIC qualification as outlined in paragraph 6b of this appendix; or

(3) Has satisfactorily completed the training program curriculum developed by the applicant as outlined in paragraph 6e of this appendix.

c. The knowledge and flight proficiency demonstration will be conducted by an FAA operations inspector in accordance with the standards shown in FAA-S-8081-5, Airline Transport Pilot and Type Rating Practical Test Standards (as amended). The demonstration should include the maneuvers and procedures listed under paragraphs 6c(1) through (8) and 6d(1) through (13) of this appendix to the maximum extent possible and will include three takeoffs and landings. The flight may be observed from the ground, from another aircraft, or may be conducted by an inspector on board the aircraft being used for the test. If conducted by an inspector on board the aircraft, the aircraft must have fully functioning dual controls. Inspectors should exercise extreme care when observing from a chase plane, and shall ensure proper preflight and inflight coordination between the crews of the two aircraft. Inspectors assigned to administer such flight checks should preferably have a background in military aircraft similar to those in which the checks are given. For surplus turbine-powered aircraft, inspectors must be initially qualified in turbine powered aircraft under the provisions of FAA Order 8700.1, General Aviation Operations Inspector's Handbook. If an inspector with experience in similar military type turbine-powered aircraft is unavailable, an inspector "well qualified," under the provisions of Order 8700.1, Volume II, Chapter 1, Section 2, paragraph 13, may be designated by the appropriate regional office in an LOA to conduct the flight check.

## **8. PRACTICAL TEST - SINGLE-PLACE AIRCRAFT.**

a. After the applicant has gained proficiency, made three takeoffs and landings, and logged at least 3 hours of flight time in the type of single-place aircraft under a temporary LOA, a demonstration of the applicant's knowledge and flight proficiency will not be required (for VFR flight only) if the applicant has satisfactorily completed the appropriate military qualification checkout as training.

b. After the applicant has gained proficiency and made three takeoffs and landings and logged at least 3 hours of flight time in the type of single-place aircraft under a temporary LOA, a demonstration of the applicant's knowledge and flight proficiency

will be required (for VFR flight only) if the applicant has satisfactorily completed the manufacturer's checkout or has received an endorsement for aeronautical knowledge in this type or in a comparable aircraft.

c. The knowledge and flight proficiency demonstration will be conducted by an FAA operations inspector in accordance with the standards shown in FAA-S-8081-5, Airline Transport Pilot and Type Rating Practical Test Standards (as amended). The demonstration should include the maneuvers and procedures listed under paragraphs 6c(1) through (8) and 6d(1) through (13) of this appendix to the maximum extent possible and will include three takeoffs and landings. The flight may be observed from the ground, or when necessary, observed from another aircraft. Extreme care should be taken when utilizing a chase aircraft to ensure proper preflight coordination is completed between the crews.

**9. UNSATISFACTORY PRACTICAL TEST.** If an applicant does not perform satisfactorily, the inspector may still issue a letter giving the applicant credit for maneuvers performed satisfactorily. The letter would allow credit for retesting within 60 days of the failure, but the letter must clearly state that it is not an LOA. If an applicant's temporary LOA has expired, the inspector may issue another temporary LOA to authorize practice and proficiency flying for the retest.

#### **10. ISSUANCE OF AN LOA.**

a. After the application has been received by the FSDO, the appropriate training accepted and satisfactorily completed, and the practical test administered and satisfactorily accomplished, as appropriate, an LOA will be issued to the pilot applicant.

b. The initial LOA for a turbine-powered aircraft will have an expiration date but may be reissued as outlined in paragraph 14 of this appendix. The initial LOA for a piston-powered aircraft is also issued with an expiration date, but may be reissued for an indefinite period. Once a pilot has qualified in three different types of single-engine or multi-engine piston-powered aircraft, at least one of which is a tail wheel airplane, a single LOA without an expiration date may be issued. This LOA would read, "All types and makes of high performance single or multi-engine piston-powered airplanes." This LOA must contain the limitation that the pilot, before acting as PIC of any high performance single-or multi-engine piston-powered aircraft not previously authorized, shall obtain an endorsement from an authorized LOA holder.

c. A separate LOA shall be issued to the applicant for each type of aircraft, either piston or turbine-powered. Superseded LOA's are not valid and should be surrendered.



d. Except for a temporary LOA, an initial LOA for a turbine-powered aircraft is valid for 24 calendar months; for a piston-powered aircraft, 12 calendar months. A pilot who has held a current LOA to operate that type of turbine-powered airplane for the preceding 24 months, who meets the recency of experience requirements in paragraph 13 of this appendix, and who has established a record of safe operation, may be reissued an LOA for another 24 months. An LOA reissued for a piston-powered aircraft is valid indefinitely. Holders of expired LOA's for turbine-powered aircraft may have their LOA's reissued for 24 calendar months provided they meet the recency of experience requirements of paragraph 13 of this appendix or comply with the requirements for initial issuance.

**11. DESIGNATION OF PERSONS OR ORGANIZATIONS AUTHORIZED TO PROVIDE REQUIRED ENDORSEMENTS.** Various local and national organizations have adopted comprehensive internal rules pertaining to pilot checkout in high performance aircraft. Those persons or organizations with a Letter of Operational Authority may be designated to endorse an applicant for the issuance of an LOA or for continued solo flight after a 6 calendar months period of inactivity. Procedures for issuance of a letter of operational authority are contained in FAA Order 8700.1, Volume II, Chapter 32, Section 1, Paragraph 23.

**12. LIMITATIONS.**

a. The appropriate provisions of parts 61 and 91 must be adhered to. Additional limitations to the LOA, other than those associated with an experimental exhibition airworthiness certificate, may be issued when considered necessary by the FAA. Examples of such limitations are as follows:

- (1) "Supersonic flight is not authorized."
- (2) "Aerobatic maneuvers are not authorized."
- (3) "VFR only."
- (4) "Formation flight is not authorized."

**NOTE:** The FAA may remove specific limitations when the applicant can justify to the FAA that the limitations are no longer necessary, that safety would not be derogated with the limitation removed, and that the appropriate training has been accomplished.

b. Pilots should be reminded that no person may operate an aircraft in formation flight, except by arrangement with the PIC of each aircraft in the formation. Formation flight demands extreme vigilance on the part of the pilots involved. Therefore, before

formation flight, a thorough preflight discussion is paramount to flight safety.

### **13. REGENCY OF EXPERIENCE.**

a. The holder of an LOA may not exercise the privileges of that letter unless:

(1) Within the preceding 6 calendar months, the holder has made at least three takeoffs and landings in one of the models authorized or a comparable model.

(2) After the 6 calendar months inactive period, the holder has obtained the following:

(a) A flight review including the normal and emergency (and abnormal if contained in the aircraft's checklist) procedures and maneuvers in the particular type or comparable type of aircraft.

(b) The endorsement by the holder of a current Letter of Operational Authority, so authorized by the FAA, who has found the pilot competent to operate the aircraft safely, or the endorsement of an organization that holds a letter of operational authority issued by the FAA.

### **14. INSTRUMENT PRIVILEGES.**

a. An applicant who desires instrument flight privileges on the LOA must show compliance with the instrument flight competency specified in § 61.63(d)(3). Otherwise, a VFR only limitation will be placed on the LOA. This limitation will be placed on the LOA for each type of aircraft for which the applicant does not demonstrate instrument flight competency.

b. If the applicant holds an instrument rating for aircraft and supplies evidence of demonstration of instrument flight competency, and the aircraft is properly equipped for instrument flight rules and not limited by the operating limitations, a VFR only limitation will not be placed on the LOA.

c. A pilot may have a VFR only limitation removed by satisfactorily completing an instrument competency demonstration within the 6 months preceding application for the limitation's removal.

d. Demonstration of instrument flight competency may be conducted in the aircraft for which an LOA is sought or in a simulator or "comparably" equipped aircraft. A "comparably" equipped aircraft should contain similar equipment to the aircraft for which an LOA is sought for the instrument flight competency demonstration.

e. This demonstration may be conducted in conjunction with that required by another operating rule or military instrument proficiency check.

f. When the demonstration is conducted in a simulator or "comparably" equipped aircraft, the applicant must demonstrate competency based solely upon the equipment/crew complement contained in the actual aircraft for which an LOA is sought. For example, if the aircraft does not require a second-in-command or does not have an auto pilot system, then the applicant may not utilize a second-in-command or an auto pilot for the instrument flight competency demonstration.

g. In the case of a single-place aircraft, demonstration of instrument competency may be given in a simulator or two-place aircraft that adequately duplicates the characteristics of the single-place aircraft.

**15. PILOT-IN-COMMAND PROFICIENCY CHECKS.** If an experimental airworthiness certificate requires more than one pilot crewmember, the pilot in command must comply with part 61 § 61.58. In addition, the second-in-command must be qualified in accordance with part 61 § 61.55.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

### Directive Feedback Information

Please submit any written comments or recommendations for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: Order \_\_\_\_\_

To: Directive Management Officer, AIR-520 \_\_\_\_\_

*(Please check all appropriate line items)*

- ☐ An error (procedural or typographical) has been noted in paragraph \_\_\_\_\_ on page \_\_\_\_\_.
- ☐ Recommend paragraph \_\_\_\_\_ on page \_\_\_\_\_ be changed as follows:  
*(attach separate sheet if necessary)*

- ☐ In a future change to this directive, please include coverage on the following subject  
*(briefly describe what you want added):*

- ☐ Other comments:

- ☐ I would like to discuss the above. Please contact me.

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

FTS Telephone Number: \_\_\_\_\_ Routing Symbol: \_\_\_\_\_